# The xtable gallery

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with small contributions from others

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## 1 Summary

This document gives a gallery of tables which can be made by using the `xtable` package to create LaTeX output. It doubles as a regression check for the package.

```
> library(xtable)
```

## 2 Gallery

### 2.1 Data frame

Load example dataset

```
> data(tli)
> ## Demonstrate data.frame
> tli.table <- xtable(tli[1:10,])
> digits(tli.table)[c(2,6)] <- 0

> print(tli.table,floating=FALSE)
```

| | grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

## 2.2 Matrix

```
> design.matrix <- model.matrix(~ sex*grade, data=tli[1:10,])
> design.table <- xtable(design.matrix)

> print(design.table,floating=FALSE)
```

| | (Intercept) | sexM | grade | sexM:grade |
|---|---|---|---|---|
| 1 | 1.00 | 1.00 | 6.00 | 6.00 |
| 2 | 1.00 | 1.00 | 7.00 | 7.00 |
| 3 | 1.00 | 0.00 | 5.00 | 0.00 |
| 4 | 1.00 | 1.00 | 3.00 | 3.00 |
| 5 | 1.00 | 1.00 | 8.00 | 8.00 |
| 6 | 1.00 | 1.00 | 5.00 | 5.00 |
| 7 | 1.00 | 0.00 | 8.00 | 0.00 |
| 8 | 1.00 | 1.00 | 4.00 | 4.00 |
| 9 | 1.00 | 1.00 | 6.00 | 6.00 |
| 10 | 1.00 | 1.00 | 7.00 | 7.00 |

## 2.3 aov

```
> fm1 <- aov(tlimth ~ sex + ethnicty + grade + disadvg, data=tli)
> fm1.table <- xtable(fm1)

> print(fm1.table,floating=FALSE)
```

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|---|---|---|---|---|---|
| sex | 1 | 75.37 | 75.37 | 0.38 | 0.5417 |
| ethnicty | 3 | 2572.15 | 857.38 | 4.27 | 0.0072 |
| grade | 1 | 36.31 | 36.31 | 0.18 | 0.6717 |
| disadvg | 1 | 59.30 | 59.30 | 0.30 | 0.5882 |
| Residuals | 93 | 18682.87 | 200.89 | | |

## 2.4 lm

```
> fm2 <- lm(tlimth ~ sex*ethnicty, data=tli)
> fm2.table <- xtable(fm2)

> print(fm2.table,floating=FALSE)
```

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 73.6364 | 4.2502 | 17.33 | 0.0000 |
| sexM | -1.6364 | 5.8842 | -0.28 | 0.7816 |
| ethnictyHISPANIC | -9.7614 | 6.5501 | -1.49 | 0.1395 |
| ethnictyOTHER | 15.8636 | 10.8360 | 1.46 | 0.1466 |
| ethnictyWHITE | 4.7970 | 4.9687 | 0.97 | 0.3368 |
| sexM:ethnictyHISPANIC | 10.6780 | 8.7190 | 1.22 | 0.2238 |
| sexM:ethnictyWHITE | 5.1230 | 7.0140 | 0.73 | 0.4670 |

### 2.4.1 anova object

```
> print(xtable(anova(fm2)),floating=FALSE)
```

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|---|---|---|---|---|---|
| sex | 1 | 75.37 | 75.37 | 0.38 | 0.5395 |
| ethnicty | 3 | 2572.15 | 857.38 | 4.31 | 0.0068 |
| sex:ethnicty | 2 | 298.43 | 149.22 | 0.75 | 0.4748 |
| Residuals | 93 | 18480.04 | 198.71 | | |

### 2.4.2 Another anova object

```
> fm2b <- lm(tlimth ~ ethnicty, data=tli)

> print(xtable(anova(fm2b,fm2)),floating=FALSE)
```

| | Res.Df | RSS | Df | Sum of Sq | F | Pr(>F) |
|---|---|---|---|---|---|---|
| 1 | 96 | 19053.59 | | | | |
| 2 | 93 | 18480.04 | 3 | 573.55 | 0.96 | 0.4141 |

## 2.5 glm

```
> ## Demonstrate glm
> fm3 <- glm(disadvg ~ ethnicty*grade, data=tli, family=binomial())
> fm3.table <- xtable(fm3)

> print(fm3.table,floating=FALSE)
```

| | Estimate | Std. Error | z value | Pr(>\|z\|) |
|---|---|---|---|---|
| (Intercept) | 3.1888 | 1.5966 | 2.00 | 0.0458 |
| ethnictyHISPANIC | -0.2848 | 2.4808 | -0.11 | 0.9086 |
| ethnictyOTHER | 212.1701 | 22122.7093 | 0.01 | 0.9923 |
| ethnictyWHITE | -8.8150 | 3.3355 | -2.64 | 0.0082 |
| grade | -0.5308 | 0.2892 | -1.84 | 0.0665 |
| ethnictyHISPANIC:grade | 0.2448 | 0.4357 | 0.56 | 0.5742 |
| ethnictyOTHER:grade | -32.6014 | 3393.4687 | -0.01 | 0.9923 |
| ethnictyWHITE:grade | 1.0171 | 0.5185 | 1.96 | 0.0498 |

### 2.5.1 anova object

```
> print(xtable(anova(fm3)),floating=FALSE)
```

| | Df | Deviance | Resid. Df | Resid. Dev |
|---|---|---|---|---|
| NULL | | | 99 | 129.49 |
| ethnicty | 3 | 47.24 | 96 | 82.25 |
| grade | 1 | 1.73 | 95 | 80.52 |
| ethnicty:grade | 3 | 7.20 | 92 | 73.32 |

## 2.6 More aov

```
> ## Demonstrate aov
> ## Taken from help(aov) in R 1.1.1
> ## From Venables and Ripley (1997) p.210.
> N <- c(0,1,0,1,1,1,0,0,0,1,1,0,1,1,0,0,1,0,1,0,1,1,0,0)
> P <- c(1,1,0,0,0,1,0,1,1,1,0,0,0,1,0,1,1,0,0,1,0,1,1,0)
> K <- c(1,0,0,1,0,1,1,0,0,1,0,1,0,1,1,0,0,0,1,1,1,0,1,0)
> yield <- c(49.5,62.8,46.8,57.0,59.8,58.5,55.5,56.0,62.8,55.8,69.5,55.0,
+            62.0,48.8,45.5,44.2,52.0,51.5,49.8,48.8,57.2,59.0,53.2,56.0)
> npk <- data.frame(block=gl(6,4), N=factor(N), P=factor(P), K=factor(K), yield=yield)
> npk.aov <- aov(yield ~ block + N*P*K, npk)
> op <- options(contrasts=c("contr.helmert", "contr.treatment"))
> npk.aovE <- aov(yield ~  N*P*K + Error(block), npk)
> options(op)
> #summary(npk.aov)

> print(xtable(npk.aov),floating=FALSE)
```

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|---|---|---|---|---|---|
| block | 5 | 343.29 | 68.66 | 4.45 | 0.0159 |
| N | 1 | 189.28 | 189.28 | 12.26 | 0.0044 |
| P | 1 | 8.40 | 8.40 | 0.54 | 0.4749 |
| K | 1 | 95.20 | 95.20 | 6.17 | 0.0288 |
| N:P | 1 | 21.28 | 21.28 | 1.38 | 0.2632 |
| N:K | 1 | 33.13 | 33.13 | 2.15 | 0.1686 |
| P:K | 1 | 0.48 | 0.48 | 0.03 | 0.8628 |
| Residuals | 12 | 185.29 | 15.44 | | |

### 2.6.1 anova object

```
> print(xtable(anova(npk.aov)),floating=FALSE)
```

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|---|---|---|---|---|---|
| block | 5 | 343.29 | 68.66 | 4.45 | 0.0159 |
| N | 1 | 189.28 | 189.28 | 12.26 | 0.0044 |
| P | 1 | 8.40 | 8.40 | 0.54 | 0.4749 |
| K | 1 | 95.20 | 95.20 | 6.17 | 0.0288 |
| N:P | 1 | 21.28 | 21.28 | 1.38 | 0.2632 |
| N:K | 1 | 33.13 | 33.13 | 2.15 | 0.1686 |
| P:K | 1 | 0.48 | 0.48 | 0.03 | 0.8628 |
| Residuals | 12 | 185.29 | 15.44 | | |

### 2.6.2 Another anova object

```
> print(xtable(summary(npk.aov)),floating=FALSE)
```

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|---|---|---|---|---|---|
| block | 5 | 343.29 | 68.66 | 4.45 | 0.0159 |
| N | 1 | 189.28 | 189.28 | 12.26 | 0.0044 |
| P | 1 | 8.40 | 8.40 | 0.54 | 0.4749 |
| K | 1 | 95.20 | 95.20 | 6.17 | 0.0288 |
| N:P | 1 | 21.28 | 21.28 | 1.38 | 0.2632 |
| N:K | 1 | 33.13 | 33.13 | 2.15 | 0.1686 |
| P:K | 1 | 0.48 | 0.48 | 0.03 | 0.8628 |
| Residuals | 12 | 185.29 | 15.44 | | |

```
> #summary(npk.aovE)

> print(xtable(npk.aovE),floating=FALSE)
```

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|---|---|---|---|---|---|
| N:P:K | 1 | 37.00 | 37.00 | 0.48 | 0.5252 |
| Residuals | 4 | 306.29 | 76.57 | | |
| N | 1 | 189.28 | 189.28 | 12.26 | 0.0044 |
| P | 1 | 8.40 | 8.40 | 0.54 | 0.4749 |
| K | 1 | 95.20 | 95.20 | 6.17 | 0.0288 |
| N:P | 1 | 21.28 | 21.28 | 1.38 | 0.2632 |
| N:K | 1 | 33.14 | 33.14 | 2.15 | 0.1686 |
| P:K | 1 | 0.48 | 0.48 | 0.03 | 0.8628 |
| Residuals1 | 12 | 185.29 | 15.44 | | |

```
> print(xtable(summary(npk.aovE)),floating=FALSE)
```

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|---|---|---|---|---|---|
| N:P:K | 1 | 37.00 | 37.00 | 0.48 | 0.5252 |
| Residuals | 4 | 306.29 | 76.57 | | |
| N | 1 | 189.28 | 189.28 | 12.26 | 0.0044 |
| P | 1 | 8.40 | 8.40 | 0.54 | 0.4749 |
| K | 1 | 95.20 | 95.20 | 6.17 | 0.0288 |
| N:P | 1 | 21.28 | 21.28 | 1.38 | 0.2632 |
| N:K | 1 | 33.14 | 33.14 | 2.15 | 0.1686 |
| P:K | 1 | 0.48 | 0.48 | 0.03 | 0.8628 |
| Residuals1 | 12 | 185.29 | 15.44 | | |

## 2.7 More lm

```
> ## Demonstrate lm
> ## Taken from help(lm) in R 1.1.1
> ## Annette Dobson (1990) "An Introduction to Generalized Linear Models".
> ## Page 9: Plant Weight Data.
> ctl <- c(4.17,5.58,5.18,6.11,4.50,4.61,5.17,4.53,5.33,5.14)
> trt <- c(4.81,4.17,4.41,3.59,5.87,3.83,6.03,4.89,4.32,4.69)
> group <- gl(2,10,20, labels=c("Ctl","Trt"))
```

```
> weight <- c(ctl, trt)
> lm.D9 <- lm(weight ~ group)

> print(xtable(lm.D9),floating=FALSE)
```

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 5.0320 | 0.2202 | 22.85 | 0.0000 |
| groupTrt | -0.3710 | 0.3114 | -1.19 | 0.2490 |

```
> print(xtable(anova(lm.D9)),floating=FALSE)
```

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|---|---|---|---|---|---|
| group | 1 | 0.69 | 0.69 | 1.42 | 0.2490 |
| Residuals | 18 | 8.73 | 0.48 | | |

## 2.8 More glm

```
> ## Demonstrate glm
> ## Taken from help(glm) in R 1.1.1
> ## Annette Dobson (1990) "An Introduction to Generalized Linear Models".
> ## Page 93: Randomized Controlled Trial :
> counts <- c(18,17,15,20,10,20,25,13,12)
> outcome <- gl(3,1,9)
> treatment <- gl(3,3)
> d.AD <- data.frame(treatment, outcome, counts)
> glm.D93 <- glm(counts ~ outcome + treatment, family=poisson())

> print(xtable(glm.D93,align="r|llrc"),floating=FALSE)
```

| | Estimate | Std. Error | z value | Pr(>\|z\|) |
|---|---|---|---|---|
| (Intercept) | 3.0445 | 0.1709 | 17.81 | 0.0000 |
| outcome2 | -0.4543 | 0.2022 | -2.25 | 0.0246 |
| outcome3 | -0.2930 | 0.1927 | -1.52 | 0.1285 |
| treatment2 | 0.0000 | 0.2000 | 0.00 | 1.0000 |
| treatment3 | 0.0000 | 0.2000 | 0.00 | 1.0000 |

## 2.9 prcomp

```
> if(require(stats,quietly=TRUE)) {
+   ## Demonstrate prcomp
+   ## Taken from help(prcomp) in mva package of R 1.1.1
+   data(USArrests)
+   pr1 <- prcomp(USArrests)
+ }

> if(require(stats,quietly=TRUE)) {
+   print(xtable(pr1),floating=FALSE)
+ }
```

| | PC1 | PC2 | PC3 | PC4 |
|---|---|---|---|---|
| Murder | 0.0417 | -0.0448 | 0.0799 | -0.9949 |
| Assault | 0.9952 | -0.0588 | -0.0676 | 0.0389 |
| UrbanPop | 0.0463 | 0.9769 | -0.2005 | -0.0582 |
| Rape | 0.0752 | 0.2007 | 0.9741 | 0.0723 |

```
>   print(xtable(summary(pr1)),floating=FALSE)
```

| | PC1 | PC2 | PC3 | PC4 |
|---|---|---|---|---|
| Standard deviation | 83.7324 | 14.2124 | 6.4894 | 2.4828 |
| Proportion of Variance | 0.9655 | 0.0278 | 0.0058 | 0.0008 |
| Cumulative Proportion | 0.9655 | 0.9933 | 0.9991 | 1.0000 |

```
> #  ## Demonstrate princomp
> #  ## Taken from help(princomp) in mva package of R 1.1.1
> #  pr2 <- princomp(USArrests)
> #  print(xtable(pr2))
```

### 2.10 Time series

```
> temp.ts <- ts(cumsum(1+round(rnorm(100), 0)), start = c(1954, 7), frequency=12)
>    temp.table <- xtable(temp.ts,digits=0)
>     caption(temp.table) <- "Time series example"

>     print(temp.table,floating=FALSE)
```

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1954 | | | | | | | 2 | 2 | 4 | 6 | 7 | 7 |
| 1955 | 8 | 10 | 9 | 11 | 10 | 10 | 11 | 12 | 12 | 12 | 12 | 12 |
| 1956 | 15 | 17 | 17 | 18 | 19 | 20 | 21 | 23 | 24 | 24 | 26 | 28 |
| 1957 | 28 | 29 | 28 | 29 | 30 | 32 | 31 | 33 | 33 | 35 | 36 | 38 |
| 1958 | 39 | 39 | 40 | 43 | 44 | 44 | 46 | 47 | 49 | 50 | 49 | 51 |
| 1959 | 51 | 53 | 54 | 55 | 57 | 59 | 61 | 62 | 63 | 64 | 65 | 67 |
| 1960 | 69 | 71 | 72 | 73 | 73 | 74 | 75 | 75 | 76 | 77 | 78 | 79 |
| 1961 | 81 | 83 | 83 | 84 | 86 | 87 | 89 | 90 | 91 | 91 | 92 | 92 |
| 1962 | 95 | 98 | 98 | 99 | 99 | 99 | 101 | 101 | 101 | 102 | | |

## 3 Sanitization

```
> insane <- data.frame(Name=c("Ampersand","Greater than","Less than","Underscore","Per cent'
+                                  Character = I(c("&",">",                "<",
> colnames(insane)[2] <- paste(insane[,2],collapse="")

> print( xtable(insane))
```

Sometimes you might want to have your own sanitization function

```
> wanttex <- xtable(data.frame( label=paste("Value_is $10^{-",1:3,"}$",sep="")))

> print(wanttex,sanitize.text.function=function(str)gsub("_","\\_",str,fixed=TRUE))
```

| | Name | &><_%$\#^~{} |
|---|---|---|
| 1 | Ampersand | & |
| 2 | Greater than | > |
| 3 | Less than | < |
| 4 | Underscore | _ |
| 5 | Per cent | % |
| 6 | Dollar | $ |
| 7 | Backslash | \ |
| 8 | Hash | # |
| 9 | Caret | ^ |
| 10 | Tilde | ~ |
| 11 | Left brace | { |
| 12 | Right brace | } |

| | label |
|---|---|
| 1 | Value_is $10^{-1}$ |
| 2 | Value_is $10^{-2}$ |
| 3 | Value_is $10^{-3}$ |

### 3.1 Markup in tables

Markup can be kept in tables, including column and row names, by using a custom sanitize.text.function:

```
> mat <- round(matrix(c(0.9, 0.89, 200, 0.045, 2.0), c(1, 5)), 4)
> rownames(mat) <- "$y_{t-1}$"
> colnames(mat) <- c("$R^2$", "$\\bar{R}^2$", "F-stat", "S.E.E", "DW")
> mat <- xtable(mat)

> print(mat, sanitize.text.function = function(x){x})
```

| | $R^2$ | $\bar{R}^2$ | F-stat | S.E.E | DW |
|---|---|---|---|---|---|
| $y_{t-1}$ | 0.90 | 0.89 | 200.00 | 0.04 | 2.00 |

You can also have sanitize functions that are specific to column or row names. In the table below, the row name is not sanitized but column names and table elements are:

```
> money <- matrix(c("$1,000","$900","$100"),ncol=3,dimnames=list("$\\alpha$",c("Income (US$)

> print(xtable(money),sanitize.rownames.function=function(x) {x})
```

## 4 Format examples

### 4.1 Adding a centering environment

```
>    print(xtable(lm.D9,caption="\\tt latex.environments=NULL"),latex.environments=NULL)
```

| | Income (US$) | Expenses (US$) | Profit (US$) |
|---|---|---|---|
| $\alpha$ | $1,000 | $900 | $100 |

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 5.0320 | 0.2202 | 22.85 | 0.0000 |
| groupTrt | -0.3710 | 0.3114 | -1.19 | 0.2490 |

Table 1: `latex.environments=NULL`

```
>     print(xtable(lm.D9,caption="\\tt latex.environments=\"\""),latex.environments="")
```

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 5.0320 | 0.2202 | 22.85 | 0.0000 |
| groupTrt | -0.3710 | 0.3114 | -1.19 | 0.2490 |

Table 2: `latex.environments=""`

```
>     print(xtable(lm.D9,caption="\\tt latex.environments=\"center\""),latex.environments="c
```

## 4.2 Column alignment

```
> tli.table <- xtable(tli[1:10,])

> align(tli.table) <- rep("r",6)

> print(tli.table,floating=FALSE)
```

| | grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

### 4.2.1 Single string and column lines

```
> align(tli.table) <- "|rrl|l|lr|"

> print(tli.table,floating=FALSE)
```

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 5.0320 | 0.2202 | 22.85 | 0.0000 |
| groupTrt | -0.3710 | 0.3114 | -1.19 | 0.2490 |

Table 3: `latex.environments="center"`

| | grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

#### 4.2.2 Fixed width columns

```
> align(tli.table) <- "|rr|lp{3cm}l|r|"

> print(tli.table,floating=FALSE)
```

| | grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

### 4.3 Significant digits

Specify with a single argument

```
> digits(tli.table) <- 3

> print(tli.table,floating=FALSE,)
```

| | grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

or one for each column, counting the row names

```
> digits(tli.table) <- 1:(ncol(tli)+1)

> print(tli.table,floating=FALSE,)
```

| | grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

or as a full matrix

```
> digits(tli.table) <- matrix( 0:4, nrow = 10, ncol = ncol(tli)+1 )

> print(tli.table,floating=FALSE,)
```

| | grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

## 4.4 Suppress row names

```
> print((tli.table),include.rownames=FALSE,floating=FALSE)
```

| grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|
| 6 | M | YES | HISPANIC | 43 |
| 7 | M | NO | BLACK | 88 |
| 5 | F | YES | HISPANIC | 34 |
| 3 | M | YES | HISPANIC | 65 |
| 8 | M | YES | WHITE | 75 |
| 5 | M | NO | BLACK | 74 |
| 8 | F | YES | HISPANIC | 72 |
| 4 | M | YES | BLACK | 79 |
| 6 | M | NO | WHITE | 88 |
| 7 | M | YES | HISPANIC | 87 |

If you want a vertical line on the left, you need to change the align attribute.

```
> align(tli.table) <- "|r|r|lp{3cm}l|r|"
```

```
> print((tli.table),include.rownames=FALSE,floating=FALSE)
```

| grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|
| 6 | M | YES | HISPANIC | 43 |
| 7 | M | NO | BLACK | 88 |
| 5 | F | YES | HISPANIC | 34 |
| 3 | M | YES | HISPANIC | 65 |
| 8 | M | YES | WHITE | 75 |
| 5 | M | NO | BLACK | 74 |
| 8 | F | YES | HISPANIC | 72 |
| 4 | M | YES | BLACK | 79 |
| 6 | M | NO | WHITE | 88 |
| 7 | M | YES | HISPANIC | 87 |

Revert the alignment to what is was before.

```
> align(tli.table) <- "|rr|lp{3cm}l|r|"
```

## 4.5 Suppress column names

```
> print((tli.table),include.colnames=FALSE,floating=FALSE)
```

| | | | | | |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

Note the doubled header lines which can be suppressed with, eg,

```
> print(tli.table,include.colnames=FALSE,floating=FALSE,hline.after=c(0,nrow(tli.table)))
```

| | | | | | |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

## 4.6 Suppress row and column names

```
> print((tli.table),include.colnames=FALSE,include.rownames=FALSE,floating=FALSE)
```

| | | | | |
|---|---|---|---|---|
| 6 | M | YES | HISPANIC | 43 |
| 7 | M | NO | BLACK | 88 |
| 5 | F | YES | HISPANIC | 34 |
| 3 | M | YES | HISPANIC | 65 |
| 8 | M | YES | WHITE | 75 |
| 5 | M | NO | BLACK | 74 |
| 8 | F | YES | HISPANIC | 72 |
| 4 | M | YES | BLACK | 79 |
| 6 | M | NO | WHITE | 88 |
| 7 | M | YES | HISPANIC | 87 |

## 4.7 Rotate row and column names

The `rotate.rownames` and `rotate.colnames` arguments can be used to rotate the row and/or column names.

```
> print((tli.table),rotate.rownames=TRUE,rotate.colnames=TRUE)
```

| | grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

## 4.8 Horizontal lines

### 4.8.1 Line locations

Use the `hline.after` argument to specify the position of the horizontal lines.

```
> print(xtable(anova(glm.D93)),hline.after=c(1),floating=FALSE)
```

| | Df | Deviance | Resid. Df | Resid. Dev |
|---|---|---|---|---|
| NULL | | | 8 | 10.58 |
| outcome | 2 | 5.45 | 6 | 5.13 |
| treatment | 2 | 0.00 | 4 | 5.13 |

### 4.8.2 Line styles

The LaTeXpackage `booktabs` can be used to specify different line style tags for top, middle, and bottom lines. Specifying `booktabs = TRUE` will lead to separate tags being generated for the three line types.

Insert `\usepackage{booktabs}` in your LaTeXpreamble and define the `toprule`, `midrule`, and `bottomrule` tags to specify the line styles. By default, when no value is given for `hline.after`, a `toprule` will be drawn above the table, a `midrule` after the table headings and a `bottomrule` below the table. The width of the top and bottom rules can be set by supplying a value to `\heavyrulewidth`. The width of the midrules can be set by supplying a value to `\lightrulewidth`. The following tables have `\heavyrulewidth = 2pt` and `\lightrulewidth = 0.5pt`, to ensure the difference in weight is noticeable.

There is no support for `\cmidrule` or `\specialrule` although they are part of the `booktabs` package.

```
> print(tli.table, booktabs=TRUE, floating = FALSE)
```

| | grade | sex | disadvg | ethnicty | tlimth |
|---|---|---|---|---|---|
| 1 | 6 | M | YES | HISPANIC | 43 |
| 2 | 7 | M | NO | BLACK | 88 |
| 3 | 5 | F | YES | HISPANIC | 34 |
| 4 | 3 | M | YES | HISPANIC | 65 |
| 5 | 8 | M | YES | WHITE | 75 |
| 6 | 5 | M | NO | BLACK | 74 |
| 7 | 8 | F | YES | HISPANIC | 72 |
| 8 | 4 | M | YES | BLACK | 79 |
| 9 | 6 | M | NO | WHITE | 88 |
| 10 | 7 | M | YES | HISPANIC | 87 |

If `hline.after` includes $-1$, a `toprule` will be drawn above the table. If `hline.after` includes the number of rows in the table, a `bottomrule` will be drawn below the table. For any other values specified in `hline.after`, a `midrule` will be drawn after that line of the table.

The next table has more than one `midrule`.

```
> bktbs <- xtable(matrix(1:10, ncol = 2))
> hlines <- c(-1,0,1,nrow(bktbs))
```

This command produces the required table.

```
> print(bktbs, booktabs = TRUE, hline.after = hlines, floating = FALSE)
```

| | 1 | 2 |
|---|---|---|
| 1 | 1 | 6 |
| 2 | 2 | 7 |
| 3 | 3 | 8 |
| 4 | 4 | 9 |
| 5 | 5 | 10 |

## 4.9 Table-level LaTeX

```
> print(xtable(anova(glm.D93)),size="small",floating=FALSE)
```

| | Df | Deviance | Resid. Df | Resid. Dev |
|---|---|---|---|---|
| NULL | | | 8 | 10.58 |
| outcome | 2 | 5.45 | 6 | 5.13 |
| treatment | 2 | 0.00 | 4 | 5.13 |

## 4.10 Long tables

Remember to insert `\usepackage{longtable}` in your LaTeXpreamble.

```
> ## Demonstration of longtable support.
> x <- matrix(rnorm(1000), ncol = 10)
> x.big <- xtable(x,label='tabbig',
+          caption='Example of longtable spanning several pages')

> print(x.big,tabular.environment='longtable',floating=FALSE)
```

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.38 | 0.13 | 0.32 | -0.61 | 1.44 | 2.22 | 1.97 | -0.24 | -1.62 | -0.53 |
| 2 | 1.94 | 0.93 | -0.40 | 0.13 | 0.88 | -0.33 | 1.00 | -1.44 | -2.04 | 1.41 |
| 3 | -0.01 | 0.89 | 0.99 | 0.46 | 0.81 | -0.11 | 0.16 | 1.17 | -1.05 | -0.26 |
| 4 | 0.67 | 0.75 | 0.16 | -0.03 | 0.94 | -0.80 | -0.66 | -0.59 | -1.14 | -1.72 |
| 5 | -2.06 | -0.15 | -0.03 | 0.25 | 0.86 | 1.52 | 0.29 | 0.46 | -0.08 | -0.04 |
| 6 | -1.61 | 1.11 | 0.44 | -0.28 | -1.60 | -0.21 | 1.29 | 0.41 | -0.21 | 1.02 |
| 7 | -1.38 | -0.39 | 1.53 | -1.77 | -1.96 | 0.99 | -1.08 | -0.28 | -3.96 | -0.01 |
| 8 | -0.79 | -1.12 | 0.05 | 0.08 | -0.28 | 0.26 | -1.85 | 1.33 | 0.63 | 1.19 |
| 9 | -0.33 | -0.87 | 0.13 | -2.13 | -0.19 | 1.29 | 0.46 | -0.57 | 0.99 | -0.77 |
| 10 | 0.05 | -1.04 | -1.69 | -1.12 | -0.01 | -0.21 | 0.30 | -2.20 | 0.27 | 0.69 |
| 11 | -0.95 | 0.59 | 1.10 | -0.57 | -0.69 | -1.20 | 0.45 | 0.76 | 0.98 | -0.33 |
| 12 | 0.41 | 0.95 | -2.17 | -0.99 | -0.41 | -0.22 | 0.10 | 1.15 | -0.65 | -0.19 |
| 13 | -1.13 | 0.31 | 0.17 | -1.19 | -2.14 | -1.37 | 1.52 | -2.61 | 0.52 | -0.90 |
| 14 | 2.33 | 0.11 | -0.57 | -0.90 | 0.64 | 1.35 | -2.00 | -2.15 | -1.14 | -1.22 |
| 15 | -0.26 | -1.19 | -0.99 | 0.54 | 0.76 | 2.44 | -2.13 | 0.92 | 0.97 | -1.14 |
| 16 | -0.09 | -0.54 | -0.35 | 0.23 | 0.29 | -0.11 | -0.53 | 1.80 | -0.16 | 0.53 |
| 17 | -2.01 | -1.52 | -1.19 | 0.89 | -0.19 | 0.12 | -0.93 | -2.34 | 1.36 | -0.85 |
| 18 | -0.67 | -0.00 | -0.68 | 0.01 | 0.17 | 0.38 | 2.10 | -0.05 | 0.40 | 0.12 |
| 19 | 0.11 | -0.52 | 0.03 | 1.25 | -2.05 | -0.41 | 1.54 | 1.21 | -1.11 | 0.53 |
| 20 | 0.27 | -0.17 | -0.07 | -1.06 | 0.36 | -0.30 | -1.49 | -0.01 | -0.57 | -0.35 |
| 21 | 0.66 | -1.27 | 0.07 | -1.59 | -0.08 | 1.30 | -0.04 | 0.52 | 1.04 | 1.64 |
| 22 | -0.77 | 0.91 | -0.93 | 1.03 | 0.84 | 1.39 | -1.16 | -1.00 | 1.22 | -1.43 |
| 23 | -0.96 | 1.08 | -1.01 | 0.98 | 1.26 | 0.22 | -0.02 | 1.23 | -2.02 | 2.07 |
| 24 | -0.69 | -0.91 | 0.51 | 1.35 | 0.40 | 0.77 | 1.35 | -0.05 | -1.84 | -0.70 |
| 25 | 1.67 | -0.23 | -1.45 | -1.45 | 0.36 | 0.61 | 0.84 | 1.47 | -0.68 | -1.25 |
| 26 | -0.65 | 0.32 | 0.80 | -0.28 | 0.50 | -1.07 | -1.24 | -1.09 | -0.63 | 1.51 |
| 27 | -0.10 | -0.67 | 0.22 | -0.16 | 0.77 | -0.97 | -0.31 | -0.64 | -1.34 | -1.85 |
| 28 | 0.43 | 0.56 | 0.70 | -1.34 | -0.14 | 0.03 | 1.67 | -0.55 | -0.28 | 0.99 |
| 29 | 1.76 | 0.25 | -1.29 | -0.89 | -0.46 | 0.42 | 0.51 | 0.15 | 0.68 | -0.10 |
| 30 | 2.12 | 1.17 | 1.16 | -0.31 | -0.75 | 1.19 | 1.15 | -0.20 | -0.88 | 0.53 |
| 31 | -0.28 | 2.25 | 0.00 | -1.18 | -0.23 | -0.86 | -0.90 | -0.07 | 1.44 | 0.54 |
| 32 | 0.34 | 0.42 | -1.01 | 0.85 | 1.17 | -0.36 | 0.94 | 1.64 | 1.35 | 1.89 |
| 33 | -0.42 | 0.32 | -0.48 | -0.52 | -0.18 | 1.31 | -0.72 | -0.35 | -0.33 | 0.67 |
| 34 | -0.20 | -0.27 | 2.01 | -1.25 | 2.15 | -0.62 | 0.16 | -0.07 | -0.95 | -1.16 |
| 35 | -0.80 | 0.26 | 0.44 | 0.18 | -0.65 | 0.73 | 0.37 | 0.62 | -0.34 | 1.57 |
| 36 | 0.32 | 0.82 | -0.01 | 1.52 | 0.92 | -0.92 | -1.32 | -0.81 | 1.50 | 0.94 |
| 37 | 2.10 | 0.10 | -1.19 | -0.64 | -0.39 | -1.30 | -0.01 | 2.81 | 0.07 | 0.63 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 38 | 1.30 | 0.61 | 0.32 | 0.78 | 1.97 | -0.87 | -0.22 | -0.39 | 1.09 | -0.59 |
| 39 | 0.45 | -0.91 | -0.82 | -0.89 | -0.02 | -0.47 | -0.49 | -2.70 | 0.65 | -0.05 |
| 40 | 0.87 | -0.54 | 0.85 | -2.94 | 0.11 | -0.11 | -0.98 | 1.03 | -0.72 | 0.42 |
| 41 | 1.69 | 0.96 | -2.26 | -0.40 | 0.49 | -0.19 | -0.19 | 0.73 | 1.97 | 1.03 |
| 42 | 0.32 | 0.40 | -0.42 | 1.15 | -0.99 | 0.43 | 0.28 | 0.58 | -0.12 | 1.13 |
| 43 | 1.23 | 0.68 | 0.53 | -0.23 | -0.64 | -0.38 | 1.04 | -0.82 | -0.99 | 0.22 |
| 44 | 0.54 | 0.51 | -0.23 | 0.78 | 1.27 | 0.77 | 0.19 | 1.38 | -1.64 | 0.56 |
| 45 | 0.92 | -0.35 | 0.88 | 1.35 | -0.98 | 1.65 | -0.62 | -1.73 | -0.62 | -1.55 |
| 46 | -0.65 | -0.21 | -0.06 | 0.16 | 0.16 | 0.02 | -0.13 | 0.41 | 0.35 | 1.62 |
| 47 | 0.65 | -1.53 | 1.15 | 2.54 | -1.76 | -2.52 | 1.71 | 1.95 | 0.88 | -0.05 |
| 48 | 2.43 | 0.33 | -0.03 | -0.41 | -2.10 | -1.04 | -0.04 | -0.34 | 0.17 | -0.04 |
| 49 | 1.11 | 0.47 | 1.97 | 0.29 | -0.66 | 0.32 | 0.78 | -0.21 | 0.59 | 1.30 |
| 50 | 0.62 | -0.38 | 0.44 | 0.24 | 0.33 | -1.42 | -0.40 | -0.08 | 1.06 | -0.17 |
| 51 | 0.11 | 1.30 | 0.52 | 1.47 | -1.52 | -1.11 | 0.26 | 1.33 | 0.72 | 0.33 |
| 52 | -0.69 | 0.85 | -1.18 | -0.30 | -1.39 | -0.31 | 0.99 | -0.08 | -0.47 | 0.46 |
| 53 | -0.39 | 0.79 | 0.55 | -0.17 | -0.77 | 2.19 | 0.06 | -0.90 | -0.81 | 1.26 |
| 54 | -0.58 | 0.49 | -0.14 | 0.52 | 0.84 | 0.27 | 1.27 | 0.76 | 0.17 | -1.70 |
| 55 | 1.57 | -0.06 | 2.00 | 0.32 | -1.40 | -0.09 | 1.31 | 1.86 | -0.33 | 1.38 |
| 56 | -0.05 | 0.15 | 0.42 | -1.15 | -0.53 | 1.49 | 0.81 | 0.32 | 0.03 | 0.31 |
| 57 | -0.22 | 0.32 | 0.06 | -0.93 | -0.33 | -1.80 | 0.63 | -0.19 | -0.96 | -0.63 |
| 58 | 1.82 | -1.48 | -0.09 | -0.13 | -0.28 | -0.36 | 1.73 | -0.49 | -1.01 | -1.07 |
| 59 | -2.51 | 0.72 | -0.49 | 1.94 | 0.41 | -2.33 | 0.80 | 0.20 | -1.03 | -0.87 |
| 60 | -0.74 | -2.20 | -1.63 | 0.26 | 0.99 | -0.07 | 0.03 | -0.27 | -0.92 | 1.78 |
| 61 | -0.05 | 0.20 | -0.41 | 0.70 | -2.16 | -0.80 | 1.64 | 0.98 | 1.59 | 1.14 |
| 62 | -0.52 | 0.37 | 0.60 | 0.41 | -0.59 | 0.13 | 0.42 | 0.09 | 1.06 | 2.35 |
| 63 | -1.58 | 0.08 | -0.78 | -0.09 | -0.91 | -0.24 | -2.09 | -0.33 | 1.81 | -0.36 |
| 64 | -1.36 | 0.19 | 0.41 | 0.68 | 0.30 | 1.79 | -0.85 | 0.14 | -0.41 | -1.16 |
| 65 | -0.25 | 0.35 | -1.58 | 0.83 | 0.04 | -0.45 | 0.99 | -0.05 | -2.22 | -0.93 |
| 66 | 0.69 | 0.16 | -0.62 | -2.29 | -0.14 | -0.43 | 0.02 | -0.90 | 0.03 | -0.16 |
| 67 | -0.86 | -0.21 | -0.72 | -2.40 | 0.69 | 1.78 | -0.18 | -0.24 | -0.64 | -0.07 |
| 68 | -1.45 | -0.38 | 3.19 | -1.55 | -0.52 | 1.22 | -0.44 | -0.20 | -0.72 | 0.81 |
| 69 | -0.88 | 0.14 | 0.43 | 0.77 | -1.70 | -0.30 | -0.59 | 0.54 | -0.27 | 0.66 |
| 70 | -0.32 | -0.79 | -0.37 | 1.05 | -2.63 | -0.53 | 0.23 | 0.28 | -0.97 | 0.18 |
| 71 | -0.67 | 0.92 | -1.22 | -1.08 | -2.08 | 0.03 | 0.91 | -1.09 | -0.72 | -0.37 |
| 72 | 0.34 | -0.16 | -0.89 | 0.25 | -1.45 | 0.13 | -0.53 | 0.70 | 1.84 | 0.46 |
| 73 | -1.21 | -1.45 | 0.36 | 1.62 | 1.97 | 1.80 | -0.42 | -0.01 | 0.01 | 0.66 |
| 74 | 1.21 | 0.89 | 0.40 | 0.67 | 0.94 | 0.94 | 1.84 | -1.39 | -0.92 | -1.01 |
| 75 | 3.04 | -0.11 | 0.52 | -1.11 | -1.46 | 0.33 | 0.64 | 1.14 | 0.92 | -0.47 |
| 76 | 1.14 | 0.66 | -0.95 | 1.16 | -0.32 | -0.30 | -1.15 | -2.17 | -0.32 | 0.68 |
| 77 | -0.22 | -0.47 | -0.46 | -0.13 | 0.12 | -1.21 | 0.10 | -1.34 | -1.96 | 1.15 |
| 78 | 0.00 | -0.01 | 1.10 | 1.06 | 0.25 | 0.92 | 0.90 | 0.53 | 0.05 | 1.56 |
| 79 | 0.26 | -0.74 | -0.12 | 0.05 | -2.10 | 0.27 | -0.18 | 1.22 | 1.29 | 0.79 |
| 80 | 0.18 | -0.40 | 1.89 | 2.01 | -0.81 | 0.12 | 1.92 | 0.20 | -1.13 | -0.35 |
| 81 | 0.48 | 1.00 | -0.77 | -0.96 | -0.92 | -1.18 | 0.83 | -0.80 | 0.45 | -0.90 |
| 82 | -0.27 | -0.58 | 0.82 | 1.08 | -0.19 | -1.88 | 0.10 | -0.58 | -0.61 | -0.81 |
| 83 | -1.00 | -0.56 | 0.48 | 0.10 | 1.85 | 1.85 | -0.50 | 1.26 | 0.62 | -0.56 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 84 | 0.61 | 0.88 | 0.23 | 0.28 | -0.20 | -0.33 | 0.72 | 1.58 | 0.61 | -1.99 |
| 85 | -0.47 | -1.15 | -0.67 | -1.47 | -0.92 | -0.29 | -0.36 | -0.46 | 1.73 | 1.14 |
| 86 | -1.25 | 2.55 | -0.69 | -0.37 | -0.34 | -1.06 | -0.40 | -0.95 | 1.10 | 2.72 |
| 87 | 0.21 | 0.80 | 1.49 | 0.05 | 0.50 | 2.09 | 0.69 | -1.61 | -0.22 | 1.51 |
| 88 | 2.06 | 0.66 | 0.42 | -0.15 | -1.66 | -1.60 | 0.06 | -0.08 | 1.90 | -0.43 |
| 89 | 1.60 | 0.87 | -1.82 | -0.93 | 1.57 | -1.58 | 0.73 | -0.91 | 1.09 | 0.01 |
| 90 | 0.80 | -0.89 | -0.60 | 1.56 | -1.30 | -3.05 | -0.41 | -0.06 | 1.40 | -0.00 |
| 91 | 0.14 | -0.83 | 1.85 | 1.01 | -0.85 | 0.71 | 1.17 | 0.03 | 0.46 | 0.02 |
| 92 | -0.04 | 0.95 | 1.87 | 0.55 | 0.52 | -0.87 | 0.25 | -0.87 | -0.43 | -0.23 |
| 93 | -0.20 | 0.22 | 0.06 | 1.64 | -1.31 | 0.29 | 3.03 | 0.27 | -0.19 | 0.07 |
| 94 | -1.07 | -0.76 | -0.44 | 1.49 | 1.23 | -1.01 | -1.58 | 0.42 | 0.02 | 1.50 |
| 95 | 0.42 | -0.05 | -1.81 | 0.73 | 1.31 | 1.75 | 0.80 | 0.57 | 0.19 | 1.28 |
| 96 | -0.11 | -0.89 | 1.50 | -0.59 | -1.89 | -1.70 | -0.77 | 0.68 | -1.78 | -1.91 |
| 97 | -0.73 | -0.47 | 1.24 | -0.62 | -0.70 | 0.53 | -0.69 | -0.65 | 0.92 | -0.35 |
| 98 | 1.32 | 1.35 | -0.74 | -0.14 | 0.27 | 0.48 | 1.01 | 1.74 | 0.58 | 1.98 |
| 99 | 0.20 | 0.12 | -0.56 | 0.83 | 0.81 | -2.59 | -0.73 | 0.99 | -0.12 | 0.73 |
| 100 | -0.74 | 0.41 | -0.10 | 1.13 | 0.18 | 0.96 | 1.76 | 0.92 | -0.01 | -0.98 |

Table 4: Example of longtable spanning several pages

### 4.11 Sideways tables

Remember to insert `\usepackage{rotating}` in your LaTeX preamble. Sideways tables can't be forced in place with the 'H' specifier, but you can use the `\clearpage` command to get them fairly nearby.

```
> x <- x[1:30,]
> x.small <- xtable(x,label='tabsmall',caption='A sideways table')

> print(x.small,floating.environment='sidewaystable')
```

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.38 | 0.13 | 0.32 | -0.61 | 1.44 | 2.22 | 1.97 | -0.24 | -1.62 | -0.53 |
| 2 | 1.94 | 0.93 | -0.40 | 0.13 | 0.88 | -0.33 | 1.00 | -1.44 | -2.04 | 1.41 |
| 3 | -0.01 | 0.89 | 0.99 | 0.46 | 0.81 | -0.11 | 0.16 | 1.17 | -1.05 | -0.26 |
| 4 | 0.67 | 0.75 | 0.16 | -0.03 | 0.94 | -0.80 | -0.66 | -0.59 | -1.14 | -1.72 |
| 5 | -2.06 | -0.15 | -0.03 | 0.25 | 0.86 | 1.52 | 0.29 | 0.46 | -0.08 | -0.04 |
| 6 | -1.61 | 1.11 | 0.44 | -0.28 | -1.60 | -0.21 | 1.29 | 0.41 | -0.21 | 1.02 |
| 7 | -1.38 | -0.39 | 1.53 | -1.77 | -1.96 | 0.99 | -1.08 | -0.28 | -3.96 | -0.01 |
| 8 | -0.79 | -1.12 | 0.05 | 0.08 | -0.28 | 0.26 | -1.85 | 1.33 | 0.63 | 1.19 |
| 9 | -0.33 | -0.87 | 0.13 | -2.13 | -0.19 | 1.29 | 0.46 | -0.57 | 0.99 | -0.77 |
| 10 | 0.05 | -1.04 | -1.69 | -1.12 | -0.01 | -0.21 | 0.30 | -2.20 | 0.27 | 0.69 |
| 11 | -0.95 | 0.59 | 1.10 | -0.57 | -0.69 | -1.20 | 0.45 | 0.76 | 0.98 | -0.33 |
| 12 | 0.41 | 0.95 | -2.17 | -0.99 | -0.41 | -0.22 | 0.10 | 1.15 | -0.65 | -0.19 |
| 13 | -1.13 | 0.31 | 0.17 | -1.19 | -2.14 | -1.37 | 1.52 | -2.61 | 0.52 | -0.90 |
| 14 | 2.33 | 0.11 | -0.57 | -0.90 | 0.64 | 1.35 | -2.00 | -2.15 | -1.14 | -1.22 |
| 15 | -0.26 | -1.19 | -0.99 | 0.54 | 0.76 | 2.44 | -2.13 | 0.92 | 0.97 | -1.14 |
| 16 | -0.09 | -0.54 | -0.35 | 0.23 | 0.29 | -0.11 | -0.53 | 1.80 | -0.16 | 0.53 |
| 17 | -2.01 | -1.52 | -1.19 | 0.89 | -0.19 | 0.12 | -0.93 | -2.34 | 1.36 | -0.85 |
| 18 | -0.67 | -0.00 | -0.68 | 0.01 | 0.17 | 0.38 | 2.10 | -0.05 | 0.40 | 0.12 |
| 19 | 0.11 | -0.52 | 0.03 | 1.25 | -2.05 | -0.41 | 1.54 | 1.21 | -1.11 | 0.53 |
| 20 | 0.27 | -0.17 | -0.07 | -1.06 | 0.36 | -0.30 | -1.49 | -0.01 | -0.57 | -0.35 |
| 21 | 0.66 | -1.27 | 0.07 | -1.59 | -0.08 | 1.30 | -0.04 | 0.52 | 1.04 | 1.64 |
| 22 | -0.77 | 0.91 | -0.93 | 1.03 | 0.84 | 1.39 | -1.16 | -1.00 | 1.22 | -1.43 |
| 23 | -0.96 | 1.08 | -1.01 | 0.98 | 1.26 | 0.22 | -0.02 | 1.23 | -2.02 | 2.07 |
| 24 | -0.69 | -0.91 | 0.51 | 1.35 | 0.40 | 0.77 | 1.35 | -0.05 | -1.84 | -0.70 |
| 25 | 1.67 | -0.23 | -1.45 | -1.45 | 0.36 | 0.61 | 0.84 | 1.47 | -0.68 | -1.25 |
| 26 | -0.65 | 0.32 | 0.80 | -0.28 | 0.50 | -1.07 | -1.24 | -1.09 | -0.63 | 1.51 |
| 27 | -0.10 | -0.67 | 0.22 | -0.16 | 0.77 | -0.97 | -0.31 | -0.64 | -1.34 | -1.85 |
| 28 | 0.43 | 0.56 | 0.70 | -1.34 | -0.14 | 0.03 | 1.67 | -0.55 | -0.28 | 0.99 |
| 29 | 1.76 | 0.25 | -1.29 | -0.89 | -0.46 | 0.42 | 0.51 | 0.15 | 0.68 | -0.10 |
| 30 | 2.12 | 1.17 | 1.16 | -0.31 | -0.75 | 1.19 | 1.15 | -0.20 | -0.88 | 0.53 |

Table 5: A sideways table

## 4.12 Rescaled tables

Specify a `scalebox` value to rescale the table.

```
> x <- x[1:20,]
> x.rescale <- xtable(x,label='tabrescaled',caption='A rescaled table')

> print(x.rescale, scalebox=0.7)
```

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.38 | 0.13 | 0.32 | -0.61 | 1.44 | 2.22 | 1.97 | -0.24 | -1.62 | -0.53 |
| 2 | 1.94 | 0.93 | -0.40 | 0.13 | 0.88 | -0.33 | 1.00 | -1.44 | -2.04 | 1.41 |
| 3 | -0.01 | 0.89 | 0.99 | 0.46 | 0.81 | -0.11 | 0.16 | 1.17 | -1.05 | -0.26 |
| 4 | 0.67 | 0.75 | 0.16 | -0.03 | 0.94 | -0.80 | -0.66 | -0.59 | -1.14 | -1.72 |
| 5 | -2.06 | -0.15 | -0.03 | 0.25 | 0.86 | 1.52 | 0.29 | 0.46 | -0.08 | -0.04 |
| 6 | -1.61 | 1.11 | 0.44 | -0.28 | -1.60 | -0.21 | 1.29 | 0.41 | -0.21 | 1.02 |
| 7 | -1.38 | -0.39 | 1.53 | -1.77 | -1.96 | 0.99 | -1.08 | -0.28 | -3.96 | -0.01 |
| 8 | -0.79 | -1.12 | 0.05 | 0.08 | -0.28 | 0.26 | -1.85 | 1.33 | 0.63 | 1.19 |
| 9 | -0.33 | -0.87 | 0.13 | -2.13 | -0.19 | 1.29 | 0.46 | -0.57 | 0.99 | -0.77 |
| 10 | 0.05 | -1.04 | -1.69 | -1.12 | -0.01 | -0.21 | 0.30 | -2.20 | 0.27 | 0.69 |
| 11 | -0.95 | 0.59 | 1.10 | -0.57 | -0.69 | -1.20 | 0.45 | 0.76 | 0.98 | -0.33 |
| 12 | 0.41 | 0.95 | -2.17 | -0.99 | -0.41 | -0.22 | 0.10 | 1.15 | -0.65 | -0.19 |
| 13 | -1.13 | 0.31 | 0.17 | -1.19 | -2.14 | -1.37 | 1.52 | -2.61 | 0.52 | -0.90 |
| 14 | 2.33 | 0.11 | -0.57 | -0.90 | 0.64 | 1.35 | -2.00 | -2.15 | -1.14 | -1.22 |
| 15 | -0.26 | -1.19 | -0.99 | 0.54 | 0.76 | 2.44 | -2.13 | 0.92 | 0.97 | -1.14 |
| 16 | -0.09 | -0.54 | -0.35 | 0.23 | 0.29 | -0.11 | -0.53 | 1.80 | -0.16 | 0.53 |
| 17 | -2.01 | -1.52 | -1.19 | 0.89 | -0.19 | 0.12 | -0.93 | -2.34 | 1.36 | -0.85 |
| 18 | -0.67 | -0.00 | -0.68 | 0.01 | 0.17 | 0.38 | 2.10 | -0.05 | 0.40 | 0.12 |
| 19 | 0.11 | -0.52 | 0.03 | 1.25 | -2.05 | -0.41 | 1.54 | 1.21 | -1.11 | 0.53 |
| 20 | 0.27 | -0.17 | -0.07 | -1.06 | 0.36 | -0.30 | -1.49 | -0.01 | -0.57 | -0.35 |

Table 6: A rescaled table

## 4.13 Table Width

The `tabularx` tabular environment provides more alignment options, and has a `width` argument to specify the table width.

Remember to insert `\usepackage{tabularx}` in your LaTeXpreamble.

```
> df.width <- data.frame(
+   "label 1 with much more text than is needed" = c("item 1", "A"),
+   "label 2 is also very long" = c("item 2","B"),
+   "label 3" = c("item 3","C"),
+   "label 4" = c("item 4 but again with too much text","D"),
+   check.names = FALSE)
> x.width <- xtable(df.width,
+   caption="Using the 'tabularx' environment")
> align(x.width) <- "|l|X|X|l|X|"

> print(x.width, tabular.environment="tabularx",
+   width="\\textwidth")
```

| | label 1 with much more text than is needed | label 2 is also very long | label 3 | label 4 |
|---|---|---|---|---|
| 1 | item 1 | item 2 | item 3 | item 4 but again with too much text |
| 2 | A | B | C | D |

Table 7: Using the 'tabularx' environment

# 5 Suppressing Printing

By default the `print` method will print the LaTeX or HTML to standard output and also return the character strings invisibly. The printing to standard output can be suppressed by specifying `print.results = FALSE`.

```
> x.out <- print(tli.table, print.results = FALSE)
```

Formatted output can also be captured without printing with the `toLatex` method. This function returns an object of class `"Latex"`.

```
> x.ltx <- toLatex(tli.table)
> class(x.ltx)
```

```
[1] "Latex"
```

```
> x.ltx
```

```
% latex table generated in R 3.0.2 by xtable 1.7-3 package
% Fri Jan 31 16:16:05 2014
\begin{table}[ht]
\centering
\begin{tabular}{|rr|lp{3cm}l|r|}
  \hline
 & grade & sex & disadvg & ethnicty & tlimth \\
  \hline
1 & 6 & M & YES & HISPANIC & 43 \\
  2 &  7 & M & NO & BLACK & 88 \\
  3 &   5 & F & YES & HISPANIC &  34 \\
  4 &    3 & M & YES & HISPANIC &   65 \\
  5 &     8 & M & YES & WHITE &    75 \\
  6 & 5 & M & NO & BLACK & 74 \\
  7 &  8 & F & YES & HISPANIC & 72 \\
  8 &   4 & M & YES & BLACK &  79 \\
  9 &    6 & M & NO & WHITE &   88 \\
  10 &     7 & M & YES & HISPANIC &    87 \\
   \hline
\end{tabular}
\end{table}
```

# 6 Acknowledgements

Most of the examples in this gallery are taken from the `xtable` documentation.

# 7 R Session information

```
> toLatex(sessionInfo())
```

- R version 3.0.2 Patched (2014-01-27 r64901),
  `x86_64-unknown-linux-gnu`
- Locale: `LC_CTYPE=en_US.UTF-8`, `LC_NUMERIC=C`, `LC_TIME=en_US.UTF-8`, `LC_COLLATE=C`, `LC_MONETARY=en_US.UTF-8`, `LC_MESSAGES=en_US.UTF-8`, `LC_PAPER=en_US.UTF-8`, `LC_NAME=C`, `LC_ADDRESS=C`, `LC_TELEPHONE=C`, `LC_MEASUREMENT=en_US.UTF-8`, `LC_IDENTIFICATION=C`
- Base packages: base, datasets, grDevices, graphics, methods, stats, utils
- Other packages: xtable˜1.7-3
- Loaded via a namespace (and not attached): tools˜3.0.2